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Ocean Springs, MS 39564
Phone 228.818.9626
Fax 228.818.9631

February 16, 2016

Mr. Gary Miller (6SF-RA)
Superfund Remedial Project Manager
U.S. Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, Texas 75202-2773

Re: San Jacinto River Waste Pits Superfund Site – Site Buoy Enhancements

Dear Gary:

As discussed over the past several weeks, the following provides a suggested design for the placement of additional buoys around the armored cap at the San Jacinto River Waste Pits Superfund Site, shown in Figure 1.

The proposed enhanced design layout for the buoy system is shown in Figure 1 and incorporates the four (4) existing “regulatory buoys” at the Site and adds five (5) new “regulatory buoys” to the system. The regulatory buoys are to be printed with the Restricted Area symbol (Figure 2) and the text “No Entry.” Figure 3 displays an example specification sheet for the regulatory buoys. Additionally, 16-inch diameter barrier floats would be placed between the regulatory buoys (as shown on Figure 1) in order to further discourage trespassing by watercraft. Figure 4 displays an example specification sheet for the barrier floats. The entire system will be connected by chain to anchors with a nominal weight of 300 pounds each (Figure 5). Also provided are the mooring suggestions for this type of buoy system (Figure 6). This design considers the effects of a 100-year event (i.e., water velocity and depth).

Anchor QEA coordinated with the U.S. Coast Guard (USCG), Port of Houston Authority (PHA), and Texas Parks and Wildlife Department (TPWD) in 2010 in connection with the original installation of buoys at the Site. At that time, we submitted a draft permit application to Mr. Tim Boriskie of the USCG, 8th District Private Aids to Navigation Group for his review and comment. Mr. Boriskie informed us that a permit was not required for the buoys because they would not be within an authorized Federal Navigation Channel. We also contacted Mr. David Casebeer with the PHA Channel Development group and were told that the PHA does not regulate private aids to navigation on the San Jacinto River. Mr. Casebeer requested a copy of the buoy application for his records, which we provided him. Finally, we contacted Lt. Johnny Longoria in the Houston District Enforcement Office of the TPWD and were informed that TPWD enforces the aids permitted by the USCG; however, Lt. Longoria did request a copy of the permit application for the buoys to add to TPWD's patrol enforcement list.

After you have approved the proposed enhanced buoy system. Anchor QEA will again contact the USCG, PHA, and TPWD to inform them of the plans for installation of the additional buoys and to obtain any necessary authorizations if required. Please let us know if you have any questions or concerns.

Sincerely,

A handwritten signature in blue ink that reads "David C. Keith".

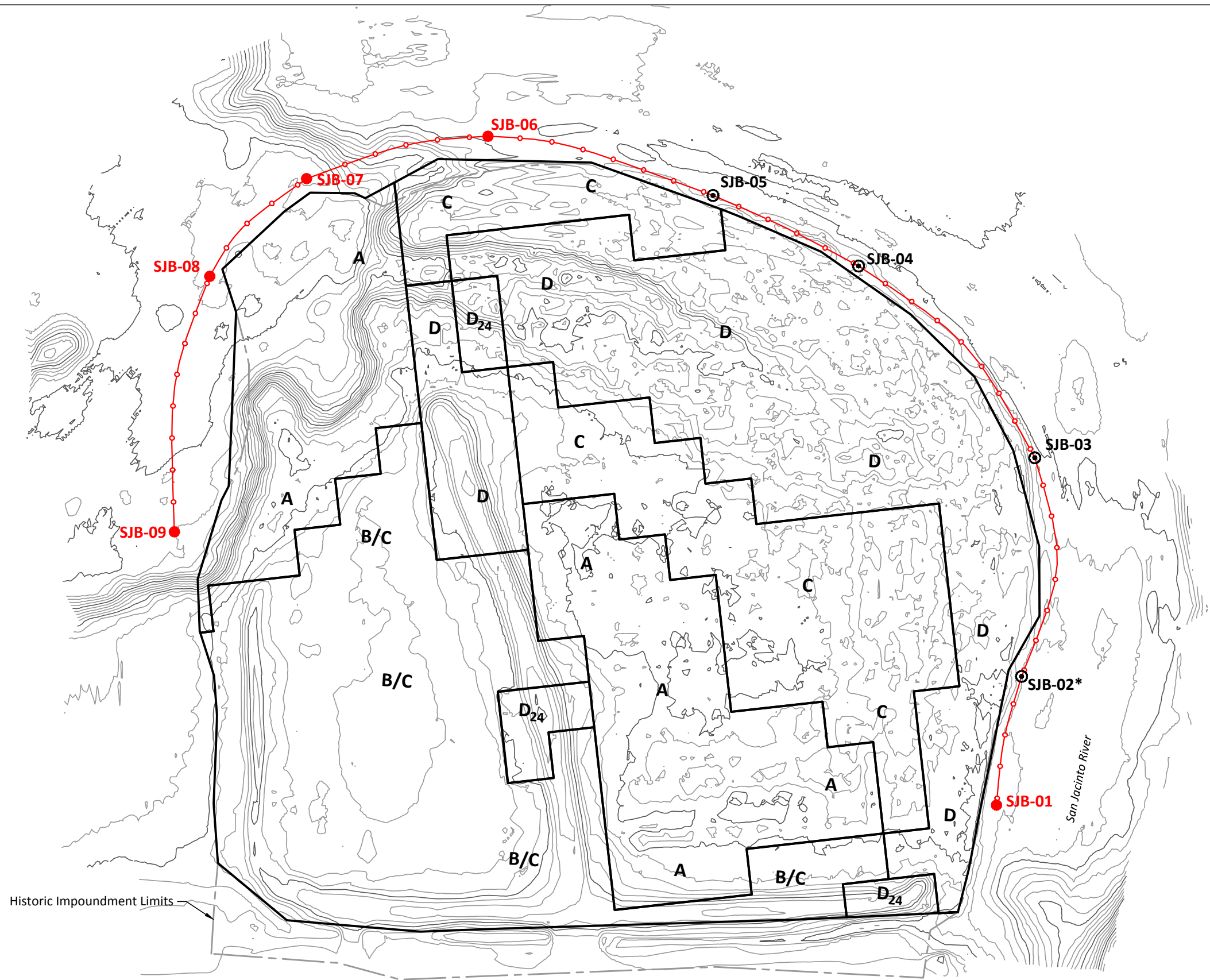
David C. Keith, Ph.D.
Anchor QEA, LLC

Cc: Dave Moreira
Phil Slowiak







Attachments

FIGURES

M:\CAD\Projects\0557-McGinnes Industrial Maintenance Corp\San Jacinto Waste Pits_Site Warning and Protective Measures\0557-SECURITY-001.dwg Buoy Locations
Feb 12, 2016 1:31pm dholmer



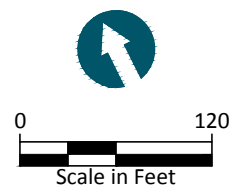
LEGEND:

-  October 2015 Bathymetric and Topographic Contours (1 Foot Interval)
- SJB-05**  Existing Buoy Location (Approximate)
- SJB-06**  Proposed Buoy Location
-  Proposed Barrier Float Line
- B/C**  Armored Cap Type and Boundary
-  Historic Impoundment Limits

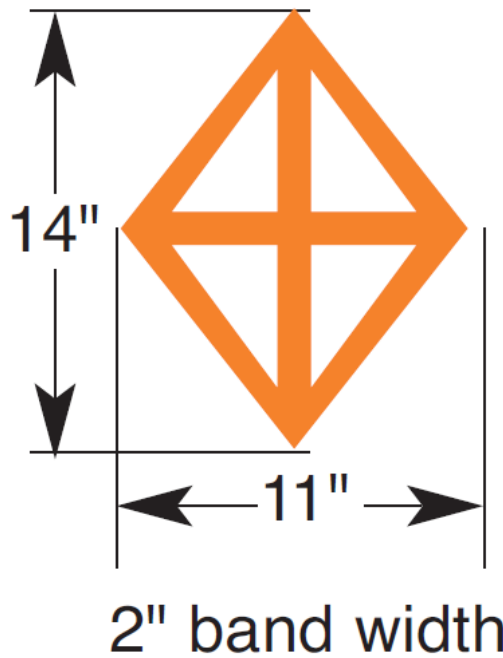
NOTE: (*) Bouy SJB-02 replaces damaged buoy.

SOURCE: Drawing prepared from survey provided by Hydrographic Consultants dated October 2015.

HORIZONTAL DATUM: Texas State Plane South Central, NAD83, U.S. Feet.
VERTICAL DATUM: NAVD 88.



RESTRICTED AREA SYMBOL



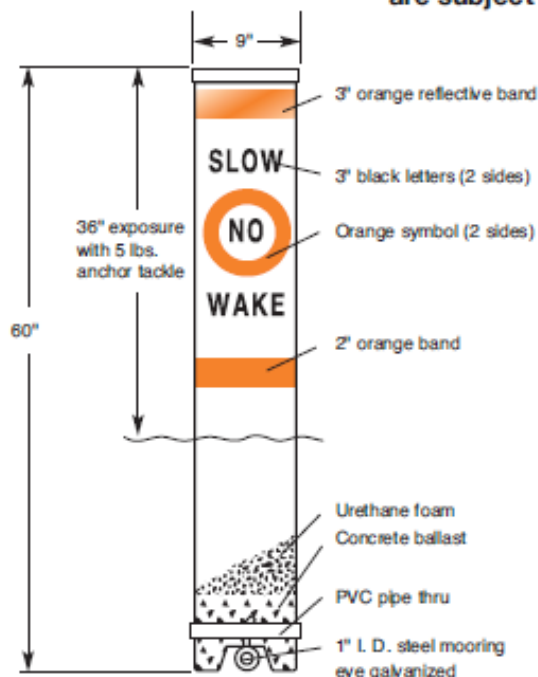
STANDARD MESSAGES

SWIM AREA
KEEP OUT
NO BOATS
BOATS KEEP OUT
CLOSED AREA
NO BOATING
DANGER DAM

Source: www.RolyanBuoys.com

Regulatory Buoys • X-Tra Heavy Duty

Super-tough regulatory buoy. Designed for problem areas where buoys are subject to abuse and vandalism.



Polyethylene type - 9" dia.

Model B961R

Features

- 9" dia. white super-tough HDPE shell. Ultraviolet inhibited.
- Shatter-proof — will not crack, chip, peel or rust.
- Completely urethane foam filled. Virtually unsinkable.
- 3"-wide reflective band at top provides excellent night visibility.
- Self-righting without tackle.
- Recessed cap allows buoy to stand upright.
- Heavy steel galvanized anchoring eye cast in an internal concrete ballast.
- Inland waterway marking symbols with standard messages included.
- Includes choice of standard symbols and messages.

Available Options

- Pickup eye built into top.
- Stainless steel anchoring eye for salt water applications.
- Agency or name identification.
- Special non-standard messages.
- Solar light (see page 11).
- Cone cap top.
- Side mooring eyes for swim areas, float lines

When ordering, specify symbols and messages desired (see bottom of page 1).

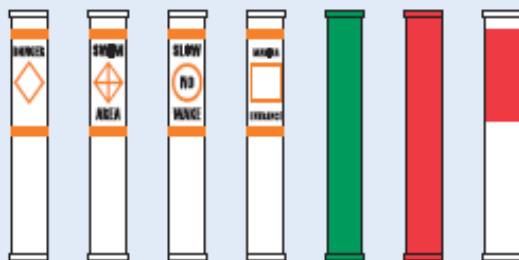
Submerged buoyancy 84 lbs.
Net weight 49 lbs.
Shipping weight 56 lbs.

Refer to installation suggestions on page 21.

NOTE: Special procedures must be followed when reconditioning HDPE type buoys. See warranty information on back cover.

EDUCATIONAL BUOYS • MINIATURE REPLICAS

Non-functional-for educational use only.



Model B2510ES

• 2½" dia. x 10" identical replicas of Rolyan® regulatory buoys showing standard inland waterway symbols and messages. Set of seven buoys includes:

- Swim Area/No Boats
- Danger/Hazard
- Slow No Wake/No Wake Idle Speed
- Marina Entrance
- Red Channel Marker
- Green Channel Marker
- Centerline Marker Red & White
- Net wt. — 1.75#



Rolyan® Buoys. To Order—Call toll-free in the U.S.: 888-269-2869 • 262-387-8728 • Fax: 866-790-3298
www.RolyanBuoys.com

Barrier Floats • Durable Polyethylene

Super-tough polyethylene hull.

Barrier floats are attached in series to restrict boating traffic or swimmers from specific danger areas such as around dams, spillways and swim areas.

Features

- Shatter-proof—will not crack, chip, peel or rust.
- Unsinkable—completely urethane foam filled.
- One-piece construction.

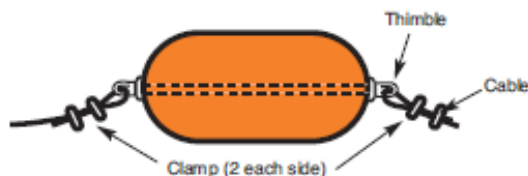


Available Options

- Available in solid international orange or all white as noted.
- Reflective bands and/or symbols available on Models B1830, B2436, and B1130.
- Yellow available on special order.
- Type B floats available with larger I.D. pipe thru center.

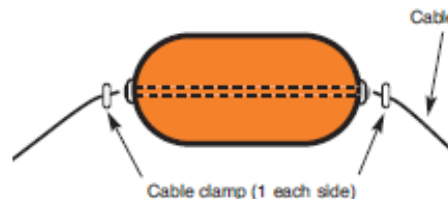
Type A

Steel rod thru float Swivel eye nuts both ends



Type B

Steel or plastic pipe thru float



Note - "W" specifies white "O" orange

Model Number	Barrier Float Styles	Dia. and Length	Type	Description—Standard colors are international orange and white, plain solid color (specify when ordering)	Sub. Buoyancy	Net Wt.
B1130AW B1130AO		12" x 13"	A	7/16" dia. galvanized steel rod with 3" dia. attachment hoop one side only.*	33 lbs.	4 lbs.
B1130BW B1130BO			B	1/2" sch. 40 PVC pipe thru float.		
B618BO		6" x 18"	A	1/2" sch. 40 PVC pipe thru	—	3 lbs.
B1318AW B1318AO		13" Dia.	A	1/2" dia. steel rod thru float. Galvanized eye nut swivels on both ends.	55 lbs.	10 lbs.
B1318BW B1318BO		18" Length	B	1/2" sch. 40 PVC pipe thru float. Anchored to prevent movement.		
Orange Only B1400AO		14" Sphere	A	7/16" dia. galvanized steel rod with 3" dia. attachment hoop one side only.*	50 lbs.	6 lbs.
B1400BO			B	1/2" sch. 40 PVC pipe thru float.		
Orange Only B1600AO		16" Sphere	A	1/2" dia. steel rod thru float. Galvanized eye nut swivels on both ends.	70 lbs.	8 lbs.
B1600BO			B	1/2" sch. 40 PVC pipe thru float.		
B1800AW B1800AO		18" Sphere	A	1/2" dia. steel rod thru float. Galvanized eye nut swivels on both ends.	—	14 lbs.
B1800BW B1800BO			B	1/2" sch. 40 PVC pipe thru float.		



* No hardware opposite side. Excellent for swim areas. (B1130A & B1400A) Optional SS hardware.

Rolyan® Buoy. To Order—Call toll-free in the U.S.: 888-269-2869 • 262-387-8728 • Fax: 866-790-3298
www.RolyanBuoy.com

Figure 4

Barrier Float Specifications Sheet
Site Warning and Protective Measures
San Jacinto River Waste Pits Superfund Site

PERMAFLEX® CABLE

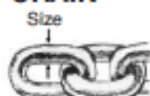
Lightweight
High strength
Safe to handle
Tough, durable, bright
yellow, waterproof
plastic covering is
highly resistant to
alkalis and salt



Covering O.D.	Part No.	Cable Dia.	Construction ①	Weight Lb./Ft.	Breaking Strength Lbs.	Standard Reel Size ②	Reel Wt. Lbs.
3/8"	B1934	3/8"	7 x 7	.028	920	1000'	28
1/2"	B1936	1/2"	7 x 7	.065	3700	500'	37
3/4"	B1931	3/4"	7 x 7	.12	6100	500'	60
1"	B1933	1"	7 x 19	.28	14400	500'	180

Permaflex Cable – Galvanized steel wire rope coated & impregnated with yellow polypropylene plastic.

CHAIN



	Size	Part No.	Weight Lb./Ft.	Working Load Limit Lbs.	Standard Drum Size ①
Proof Coil Heavy Duty Steel Chain	1/4"	B1828	.42	1300	400'
Hot Dipped Galv.	3/8"	B1829	1.36	2650	200'
	1/2"	B18210	2.3	4500	100'

NOTES: ① Chain may also be purchased by the foot. Subject to cut charge.

GALVANIZED HARDWARE



CABLE THIMBLES

Standard
Electro
Galvanized

Heavy Duty
Hot Dipped
Galvanized

Size	Part No.	Weight Lb./Ft.
3/8"	B2311	.03
1/2"	B2312	.04
3/4"	B2313	.05
1"	B2316	.15
1 1/2"	B2324	.08
2"	B2321	.11
2 1/2"	B2323	.47



CABLE CLAMPS

Standard
Electro
Galvanized

Heavy Duty
Hot Dipped
Galvanized

3/8"	B1831	.2
1/2"	B1832	.3
3/4"	B1833	.4
1"	B1835	.5
1 1/2"	B2331	.11
2"	B2332	.16
2 1/2"	B2333	.28
3"	B2335	.82



CONNECTING LINKS

Electro
Galvanized

3/4"	B1891	.10
1"	B1892	.25
1 1/2"	B1893	.54



QUICK LINKS

Electro
Galvanized

3/8"	B1801	.10
1/2"	B1803	.19
3/4"	B1804	.38



ANCHOR SHACKLES

Hot Dipped
Galvanized

3/4"	B1900	.25
1"	B1901	.30
1 1/2"	B1902	.75



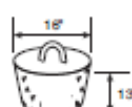
SWIVELS

Hot Dipped
Galvanized

3/8"	B1921	.21
1/2"	B1922	.61
3/4"	B1923	.93

ANCHORS

ANCHORS CONCRETE



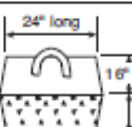
B1842
3/8" Round
Steel Eye
Hot Dipped
Galvanized

Avg. Wt. Lbs.

Under-water Wt. Lbs.

90

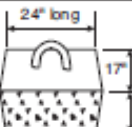
54



B21620
3/8" Round
Steel Eye
Hot Dipped
Galvanized

200

164

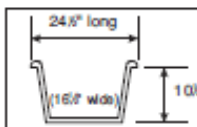


B2152
3/8" Round
Steel Eye
Hot Dipped
Galvanized

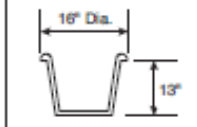
300

180

ANCHOR KITS



B2161
Tough, high-density
polyethylene anchor
form. Cast up to 300
lb. concrete anchors.



B2163
Plastic anchor form
for 90 lb. concrete
anchors.



B2162
1/2" Steel anchor eye
and steel wire mesh.

Stainless steel hardware available.
Call for pricing.



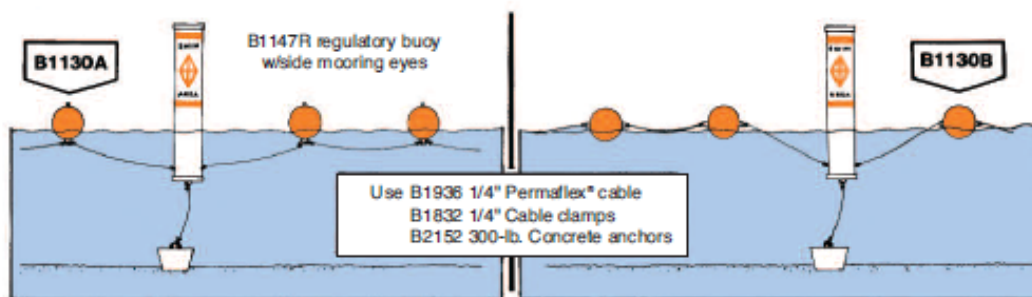
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Application and Mooring Suggestions (continued)

21

Suggestions For Using B1130 Floats with B1147R Buoys in Swim Areas

Also see chain, cable, hardware and anchor information, page 17.

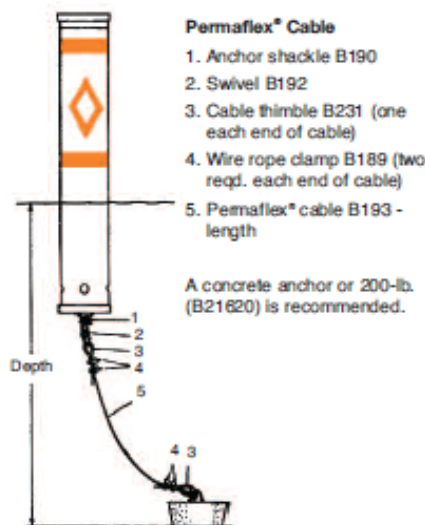
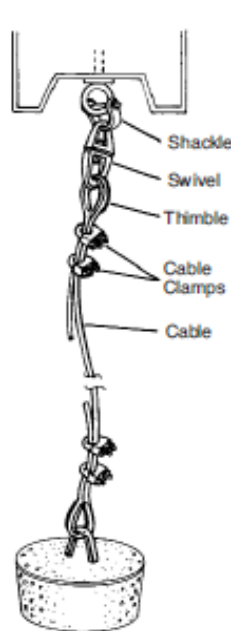


Note: The design and selection of a mooring system should be determined by a qualified professional engineer who is familiar with the specific application and local conditions. The illustrations shown are provided for informational purposes and are not intended to be suggested designs. The company assumes no responsibility for any mooring system based upon these illustrations.

Layout Suggestions For Using B1147R Buoys In Swim Areas



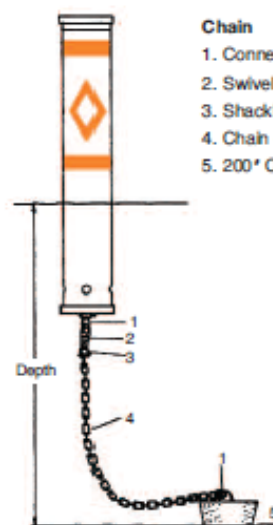
Installation Suggestions for B1147R or B961R Buoys With Anchors



Permaflex® Cable

1. Anchor shackle B190
2. Swivel B192
3. Cable thimble B231 (one each end of cable)
4. Wire rope clamp B189 (two reqd. each end of cable)
5. Permaflex® cable B193 - length

A concrete anchor or 200-lb. (B21620) is recommended.



Chain

1. Connecting link B1891
2. Swivel B1921
3. Shackle B1900
4. Chain - B1828
5. 200' Concrete anchor B21620

Permaflex® Cable		
SIZE (IN.)	PART NO.	Max. Length 1147 Type Buoys will Support
3/16"	B1934	100'
1/4"	B1936	75'
5/16"	B1931	45'
15/32"	B1933	18'

Proof Coil Chain		
SIZE (IN.)	PART NO.	Max. Length 1147 Type Buoys will Support
1/4"	B1828	12'

For cable, chain and hardware, see page 17.

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